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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/430,437	10/29/1999	JAYANTA KUMAR DEY	99-849	7301

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VERIZON CORPORATE SERVICES GROUP INC.
C/O CHRISTIAN R. ANDERSON
600 HIDDEN RIDGE DRIVE
MAILCODE HQEO3HO1
IRVING, TX 75038

EXAMINER

BIENEMAN, CHARLES A

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 07/22/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/430,437

Applicant(s)

DEY ET AL.

Examiner

Charles A. Bieneman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 18-25, 27-40 and 44-51 is/are rejected.
- 7) ☒ Claim(s) 15-17, 26, 41-43 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the following communications: Corrected Drawings, Amendment, and Terminal Disclaimer, all filed on June 20, 2003.
2. Claims 1-52 are pending. Claims 1 and 27 are independent claims.

Priority

3. Applicants correctly note on page 17 of their Remarks that the acknowledgement of a claim for foreign priority in the Office action summary mailed on March 17, 2003 was in error.

Drawings

4. The corrected or substitute drawings were received on June 20, 2003. These drawings are acceptable to the examiner.

Double Patenting

5. The non-statutory double-patenting rejection made in the Office action mailed March 17, 2003 (hereinafter the "previous action") is withdrawn in light of the Terminal Disclaimer that applicants filed on June 20, 2003.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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7. **Claims 22-23 and 48-49** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,569,206 B1 (hereinafter "the '206 patent"). Although the conflicting claims are not identical, they are not patentably distinct from each other they recite subject matter that one of ordinary skill in the art would have recognized as being substantially the same. For example, claim 1 of the '206 patent and claim 22 of the present application each recite a method for finding documents accessed through the internet relating to temporal portions of the documents using scores evaluated using Robertson's near term frequency.

Claim Rejections - 35 USC § 112

8. The rejections of claims 25-26 and 51-52 made in the previous action under 35 USC § 112 have been cured by applicants' amendments to those claims, and are accordingly withdrawn.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. **Claims 1-7, 18-19, 27-33, and 44-45** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,708,845 to Wistendahl et al., issued January 13, 1998, in view of U.S. Patent Number 6,311,178 B1 to Bi et al., issued October 30, 2001, filed September 9, 1998 and U.S. Patent Number 4,845,697 to Giddings, issued July 4, 1989, filed November 27, 1987. With respect to the rejection of each dependent claim below, the preceding rejection(s) of the relevant base claim(s) is incorporated therein.

Regarding **independent claims 1 and 27**, Wistendahl et al. teach (a) in response to a signal of interest at a particular time during the temporal document, identifying a portion of the

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temporal document for which related documents are to be found and (b) selecting text associated with the portion of the temporal document identified. (Wistendahl et al., col. 7, lines 55-59.)

Further, Wistendahl et al. do not teach (c) weighting each term in the selected text by a function $W(t)$ according to the time t at which the term occurs relative to the time at which the signal of interest occurs and (d) finding the related documents by use of information retrieval techniques as applied to the weighted terms. However, Bi et al. teach weighting search terms and further teach that this step provides the benefit of giving users search results with which they are more likely to be satisfied. (Bi et al., col. 2, lines 38-48.) Moreover, Giddings would have suggested to one of ordinary skill in the art combining and extending Wistendahl et al. and Bi et al. to use a function $W(t)$ according to the time t at which the term occurs relative to the time at which the signal of interest occurs inasmuch as Giddings teaches a technique for searching video data in which, upon a failure to find a predetermined frame, a search is conducted back and forth of successive frames surrounding the given frame for a given time period. (Giddings, col. 5, lines 27-42.) One of ordinary skill in the art would have been further motivated to implement a function $W(t)$ by the recognition that a search result close in time to the signal of interest would have been more likely to have been relevant. Therefore, it would have been obvious to one of ordinary skill in the art to have combined Wistendahl et al., Bi et al., and Giddings to weight each term in the selected text by a function $W(t)$ according to the time t at which the term occurs relative to the time at which the signal of interest occurs and (d) find the related documents by use of information retrieval techniques as applied to the weighted terms.

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Regarding **dependent claims 2 and 28**, Wistendahl et al. teach that the temporal document is video and audio material inasmuch as they teach a movie with audio and video components. (Wistendahl et al., col. 7, lines 55-56.)

Regarding **dependent claims 3 and 29**, Wistendahl et al. teach that the video material is stored on a video server inasmuch as this element is inherent in the teaching of large digital libraries transmitted to subscribers. (Wistendahl et al., col. 6, line 58, col. 7, line 6.)

Regarding **dependent claims 4 and 30**, Wistendahl et al. do not explicitly teach applying speech recognition techniques to the audio component of the identified temporal document. However, Logan et al. suggest this step inasmuch as they teach searching a collateral text file (Logan et al., col. 39, lines 10-14) and also teach voice input to navigate program files. (Logan et al., Abstract.) Therefore, it would have been obvious to one of ordinary skill in the art to have applied speech recognition techniques to the audio component of the identified temporal document.

Regarding **dependent claims 5 and 31**, Wistendahl et al. teach pop-up movie trivia, which is the equivalent of close-captioned text. (Wistendahl et al., col. 7, lines 55-59.)

Regarding **dependent claims 6 and 32**, Wistendahl et al. teach the temporal document including text as discussed above regarding claims 5 and 31.

Regarding **dependent claims 7 and 33**, Wistendahl et al. teach that the document text varies with time and the selected text is that portion of the temporal document identified. (Wistendahl et al., col. 7, lines 53-59.)

Regarding **dependent claims 18 and 44**, Wistendahl et al. teach accessing related documents through the Internet. (Wistendahl et al., col. 5, lines 14-15.)

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Regarding **dependent claims 19 and 45**, Wistendahl et al. teach selecting the related documents from among a collection of documents which may be accessed through the Internet. (Wistendahl et al., col. 5, lines 14-15; col. 8, lines 66-67.) Wistendahl et al. do not explicitly teach utilizing databases comprising information about the collection but it would have been obvious to one of ordinary skill in the art to utilize such databases because it was well known in the art that databases were the most common devices in which collections of information were stored and one of ordinary skill in the art would have recognized that utilizing a database to select documents was an efficient and reliable way of doing so.

11. **Claims 8-14 and 34-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wistendahl et al. in view of Bi et al. and Giddings and further in view of U.S. Patent Number 6,199,076 B1 to Logan et al., issued March 6, 2001, filed October 2, 1996.

Regarding **dependent claims 8 and 34**, Wistendahl et al. does not teach the document text including news bulletins, weather, sports scores, or stock information. However, Logan et al. suggest extending Wistendahl et al. to include such a step inasmuch as they teach that there is a need to be able to search through news, weather, and business data. (Logan et al., col. 1, line 10 – col. 2, line 3.)

Regarding **dependent claims 9 and 35**, Wistendahl et al. do not teach that $W(t)$ is equal for all times between t_1 before the signal of interest is given and t_2 before the signal of interest and zero for all other times. However, Logan et al. teach searching a program segment in which $W(t)$ is equal for all times between t_1 before the signal of interest is given and t_2 before the signal of interest and zero for all other times. (Logan et al., col. 39, lines 10-19.) Moreover, one of ordinary skill in the art would have recognized that a user might want to search within a given

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time frame only and not without it. Therefore, it would have been obvious to one of ordinary skill in the art to have specified that $W(t)$ is equal for all times between t_1 before the signal of interest is given and t_2 before the signal of interest and zero for all other times.

Regarding **dependent claims 10 and 36**, Wistendahl et al. do not explicitly teach that t_1 is 2 seconds and t_2 is 30 seconds. However, Wistendahl et al. do teach that the concept of setting time intervals during video display was known in the art. (Wistendahl et al., col. 5, lines 23-28.) Moreover, one of ordinary skill in the art would have recognized that the interval within a search was done should start a few seconds, *i.e.*, 2 seconds before the signal of interest was received to account for the user's reaction time and that the search should go a certain amount back in time, *i.e.*, 30 seconds.

Regarding **dependent claims 11 and 37**, Wistendahl et al. do not teach that $W(t)$ is equal for all times between t_1 before the signal of interest is given and t_2 before the signal of interest and decreases from t_1 until the time of the signal, and increases from a time t_3 before the signal is given to the time t_2 , and is zero for all other times.

Regarding the recitation that $W(t)$ is equal for all times between t_1 before the signal of interest is given and t_2 before the signal of interest, the rejection of claims 9 and 35 above is fully incorporated herein.

Further, it would have been obvious to one of ordinary skill in the art to decrease $W(t)$ from t_1 until the time of the signal because one of ordinary skill in the art would have recognized that the closer in time to the signal of interest the more likely it was that elapsed time was due only to a user's reaction time and not to interest in the elapsed material.

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Further, it would have been obvious to one of ordinary skill in the art to decrease $W(t)$ from t_2 until t_3 because one of ordinary skill in the art would have recognized that, up to a certain point, as the time got closer to the time when the signal of interest was expressed, it would be more likely that time period contained the subject matter in which the user was interested.

Regarding **dependent claims 12 and 38**, Wistendahl et al. do not explicitly teach that t_1 is 2 seconds and t_2 is 15 seconds, and t_3 is 30 seconds. However, Wistendahl et al. do teach that the concept of setting time intervals during video display was known in the art. (Wistendahl et al., col. 5, lines 23-28.) Moreover, one of ordinary skill in the art would have recognized that the interval within a search was done should start a few seconds, *i.e.*, 2 seconds before the signal of interest was received to account for the user's reaction time and that the search should go a certain amount back in time, *i.e.*, 30 seconds, and also that there would be a certain point, *i.e.*, 15 seconds, within the 30 seconds at which the likelihood of finding relevant subject matter would begin to diminish.

Regarding **dependent claims 13 and 39**, Wistendahl et al. does not disclose $W(t)$ behaving linearly, but it would have been obvious to one of ordinary skill in the art to have it do so because one of ordinary skill in the art would have recognized that the likelihood of finding relevant search results would most likely increase or decrease linearly with time.

Regarding **dependent claims 14 and 40**, the rejection of claims 12 and 38 above is fully incorporated herein.

12. **Claims 20-21, 24-25, and 46-47, and 50-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wistendahl et al., Bi et al., and Giddings as applied to claims 19 and 45 above,

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and further in view of U.S. Patent Number 6,182,065 B1 to Yeomans, issued January 30, 2001, filed April 22, 1998.

Regarding **dependent claims 20 and 46**, Wistendahl et al. do not teach selecting related documents according to scores achieved according to a formula depending on the occurrence of terms which occur in text associated with the portion of the temporal document identified, where each term is weighted by a function $W(t)$ according to the time t at which the term occurs relative to the time at which the signal of interest occurs. However, Yeomans teaches weighting search results according to their predicted relevance. (Yeomans, col. 4, lines 60-62.) One of ordinary skill in the art would have recognized that weighting allowed users to see more relevant search results, and would also have recognized that search results may have been more or less relevant according to where they occurred in time. Therefore, it would have been obvious to one of ordinary skill in the art to implement the steps recited in claims 20 and 46.

Regarding **dependent claims 21 and 47**, Wistendahl et al. do not teach, but it would have been obvious to one of ordinary skill in the art to implement, selecting a predetermined number of documents, 1000, because it was well known in the art to limit search results to a predetermined number and one of ordinary skill in the art would have recognized that this provided the benefit of not overwhelming the user, and moreover would have recognized that 1,000 documents was an upper limit of the number of documents that could comfortably be retrieved.

Regarding **dependent claims 24 and 50**, Wistendahl et al. do not teach, but it would have been obvious to one of ordinary skill in the art to implement, the step of using terms in portions of the document other than the identified portion in calculating scores because one of

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ordinary skill in the art would have recognized that such terms could have a bearing on whether the document was relevant to the user's signal of interest.

Regarding **dependent claims 25 and 51**, Wistendahl et al. do not teach, but it would have been obvious to one of ordinary skill in the art to implement, the step of having the determination of documents receiving the highest scores carried out using compressed document surrogates because one of ordinary skill in the art would have recognized that working with compressed document surrogates would have been more efficient than working with the full document.

13. **Claims 22-23 and 48-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wistendahl et al., Bi et al., Giddings, and Yeomans as applied to claims 20 and 46 above, and further in view of S.E. Robertson et al., "Some Simple Effective Approximations to the 2-Poisson Model for Probabilistic Weighted Retrieval," Proceedings of the 17th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (1994), pages 232-241 (hereinafter "Robertson").

Regarding **dependent claims 22-23 and 48-49**, Wistendahl et al. does not teach using Robertson's Term Frequency to provide a score to a document in a collection. However, Robertson teaches use of probabilistic models with variables comprising within-document, term frequency, document length, and within-query term frequency, and states that the method taught provides considerable performance improvements. (Robertson, Abstract, page 232.) Therefore, it would have been obvious to one of ordinary skill in the art to have implemented the steps recited.

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Allowable Subject Matter

14. **Claims 15-17, 26, 41-43, and 52** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. A statement of reasons for the indication of allowable subject matter was given in the previous action.

Response to Arguments

16. Applicants' arguments with respect to claims 1 and 27 have been considered but are moot in view of the new ground(s) of rejection. However, applicants' argument regarding Giddings remains relevant because Giddings is used in the present rejection of claims 1 and 27.

With respect to Giddings, applicants argue that he teaches searching for a frame within a prescribed distance from a selected frame, and not within a time t relative to the time at which a signal of interest is received. (Remarks, page 13, lines 15-20.) However, inasmuch as video frames inherently succeed each other over time, one frame a prescribed distance from a second frame is inherently within a time t of the second frame. Thus, the examiner takes the position that Giddings' teaching is equivalent to teaching a search according to a time t relative to the receipt of a signal of interest.

Conclusion

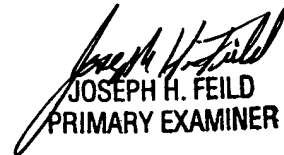
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Bieneman whose telephone number is 703-305-8045. The examiner can normally be reached on Monday - Thursday, 6:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on 703-305-9792. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

CAB
July 16, 2003


JOSEPH H. FEILD
PRIMARY EXAMINER